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The Butchers' Warranty.

For years past the butchers have been the victims of a custom which enables farmers and dealers to sell them bullocks suffering from latent tuberculosis. Neither vendor nor purchaser suspected such a condition, which was made evident only after slaughter. The presence of disease rendered the carcase wholly or partially unsaleable for human consumption, and the loss fell solely upon the butcher. This, however, was not the worst of the matter, because the butcher ran the serious risk of being summoned and fined, with the concurrent loss of reputation and business. In recent years meat inspection has become more rigid and universal, and consequently the butchers' loss from tuberculosis has become more and more pronounced.

During all these years the vendors of bullocks suffering from latent disease have done nothing to help the butcher; they have seen his losses and declined to share them, they have, like Brer Fox, "laid low and said nuffin." Self-defence has now driven the butchers to revolt against this one-sided dealing, and they have, through their Federation, given notice that on and after November 2nd they will decline to buy cattle unless with a warranty that the animals are free from such disease as will lead to seizure of the carcase. The farmers, dealers, and salesmen have combined to oppose the butchers by refusing a warranty, and both sides are preparing for a serious trade conflict. Our sympathies are entirely with the butchers, who hitherto have sustained all the loss, all the opprobrium, and all the anxiety. The question, so far, is merely one between the butcher and the farmer - the buyer and seller—but it concerns the general public very directly. Meat consumers object to be supplied with tuberculous meat and they pay out of the rates medical, veterinary, and sanitary officers to protect them from diseased meat. The cost of inspection will remain so long as nothing is done to decrease the spread of tuberculosis among bovines. Payments may be made for inspection; compensation might be made to butchers, but the evil would remain, and therefore it is illogical and useless to allow farmers to cultivate tuberculosis and butchers to be fined or imprisoned without doing something to stop the disease at its source.

The agriculturists are now attempting to apologise for the injury to the butcher by asking the public to pay the butcher for his loss whilst declining to share it with him. Where is the benefit to the public in paying the butcher if the farmer is permitted to neglect the spread of tuberculosis? What public gain is to be derived from compensating the butcher for loss if the disease is permitted to remain without control? The Law and common sense of the country will not tolerate a brewer selling beer containing arsenic, or the forage merchant selling oats contaminated with anthrax, why should the farmer be allowed to sell cattle suffering from latent tuberculosis or milk containing tubercle bacilli? There is, of course, no excuse for one delinquent more than another, but whilst the law controls the brewer and the corn dealer it leaves the farmer a free hand.

The approaching quarrel between farmer and butcher cannot be satisfactorily settled by existing law. It must be fought out as a mere trade difference, but all who understand the question will sympathise with the butcher.

Not unnaturally both sides claim that they should be compensated by the State, they argue that their property is seized to protect the public and the public should pay. This claim is illogical, for it amounts to this—that they should be paid for not selling the public a dangerous and poisonous article. The farmer says he sold an apparently healthy animal, the butcher says he bought an animal in which he could detect no disease, and both claim compensation!

The mistake on both sides is in believing that compensation is a payment to simply indemnify a trade against loss. If this were so every trade would have some claim against the State, and individual care and action would cease.

Compensation for disease in animals is not, and never was, a payment to help the owner of stock in his losses. It is a payment to reward a man who assists in the permanent suppression of a cause of natural loss. Compensation is attached to regulations which aim at stamping out once and for all a national loss. When it can be shown that State regulations are likely to permanently exterminate a cause of national loss - such as bovine tuberculosis or equine glanders—there is a logical reason for the payment of compensation.

The butcher and the farmer have no claim for trade losses or risks. They would have a claim for compensation under rules which will free the country from bovine tuberculosis, and they should join hands in pressing upon Government such legal measures as would protect them both and ensure the permanent elimination of a disease which causes great monetary loss and inestimable human suffering.

The warranty is simply a trade question in which all the facts and arguments are in favour of the butcher, but the question of compensation is inseparable from measures to permanently remove bovine tuberculosis.

It is not the Local Government Board that can act—it is the Board of Agriculture.

AZOTURIA.

Subject.—Bay Hackney mare, 15 hands high, six years old. I bought the mare as a four year old and had driven her regularly for two years. She had been in the stable for two days, and about two miles from home she had a very bad attack, with the usual symptoms. I got her home in two days time and she made an uneventful recovery. In about three months time, after being in the stable for one day only she had another attack, and every time she was taken out for exercise, if it was only for 200 yards, she would get a light attack, but the urine would not be discoloured on these minor attacks, only the characteristic stiffness. She was turned out to grass for four months, and brought in again and worked well for over a year, but one day she picked up a nail. All the oats was withheld, only bran and hay, but in spite of all when she was exercised for the first time after the accident she showed the usual symptoms. In a fortnight's time she appeared allright, and after she was exercised under the saddle for about an hour one day I drove her, and when about ten miles from home she was taken bad. All this time she was having diuretic powder every night. In all she has had about twenty attacks, four of which happened in harness, and now she is working all right again, but the difficulty is if she is kept in the stable for one day, from any cause whatever she will be the same again. If she was not the best trapper I ever sat after I would not take the trouble I have already taken with her. If any member can give any suggestions as to prevention I shall esteem it a great favour.

G. Jones Roberts, F.R.C.V.S.

Pwllheli.

ABSTRACTS FROM FOREIGN JOURNALS.

The Fate of the Tetanus Toxin in the Digestive Canal.

It is known that the bacillus of tetanus lives in the digestive canal of herbivora without giving rise to the disease. Moreover, its toxin is absolutely inactive when ingested, and this is true in the case of other microbial poisons, such as that of diphtheria.

Various hypotheses have been advanced to explain this digestive immunity.

(1) The intestinal mucous membrane detains or destroys the toxin by the properties of its epithelium, the liver completes the work.

(2) The microbes of the intestine take part in this destruction.

(3) The toxins are neither absorbed nor destroyed, but are expelled by the direct natural passage.

(4) Finally, an attenuative or destructive action of the digestive juices has been perceived. Pepsin, with the addition of 3 per cent. of hydrochloric acid, attenuates the diphtheria toxin. Bile and pancreatic juice, and especially a mixture of the two, have the same action upon the toxin of tetanus.

Vincent, in the *Annales de l'Institut Pasteur*, gives an account of some researches he has undertaken regarding this last point. He has found that the tetanus toxin is destroyed *in vivo*, in the stomach of the guinea-pig, in less than an hour. In the duodenum, it is destroyed after two or three hours, and in the large intestine, after the same time. He has further studied the action of the gastric, biliary, pancreatic, and enteric juices *in vitro*, and has found that they destroy the toxicity of the tetanus poison. He interprets this as a phenomena of digestion, as he finds that the digestive and antitoxic properties of the gastric and pancreatic ferments vary alike under similar conditions.

Pepsin loses its anti-toxic effect in the absence of acid. The pancreatic juice is only active in the presence of the enteric juice, exactly as is the case in the digestion of albuminoids. Heating these two juices to 65 C. (=149 F.), which suppresses their peptonising property, also causes their action upon the toxin to disappear. The proteolytic action of the pancreatic juice may be increased by the addition of chloride of calcium, which also increases its action upon the toxin.—(*Annales de Méd. Vét.*)

W. R. C.

LINCOLNSHIRE VETERINARY MEDICAL ASSOCIATION.

A meeting was held at the Albion Hotel, Lincoln, on Thursday, October 8th. The chair was taken by the President, Mr. W. G. B. Dickinson, F.R.C.V.S., F.R.S.E., of Boston, and also present were Professor Penberthy, Messrs. G. Lockwood (hon. sec.), Peterborough; C. Hartley, Lincoln; T. B. Bindloss, Long Sutton; R. Bett, Benniworth; R. W. Clarke, Wragby; T. Hicks, Metheringham; J. Marshall, Horncastle; J. Sheffield, Holbeach; and Messrs. C. Sykes, Lincoln, and C. W. Tindall, visitors.

The minutes of the Peterborough meeting were read and confirmed.

The Hon. Sec. said he had received letters of apology for inability to attend from Messrs. R. W. Knowles, F. L. Gooch, H. H. Truman, C. W. Townson, T. A. Rudkin, H. Howse, and W. W. Grasby.

He had also received a letter from Mr. Sheffield, thanking the Association for the subscriptions raised on his behalf in his recent legal action.

Mr. C. Hartley, M.R.C.V.S., of Lincoln, was unanimously elected a member of the Association.

Interesting Cases.

The President mentioned the case of a two-year-old thoroughbred colt which his owner had bought at a high figure at Newmarket for breeding purposes. The morning after his arrival at the stud he was found to be sweating, trembling—particularly about the loin and hind quarters—occasionally lifting his hind leg, and swishing his tail. His food was untouched. His temperature was 102, his pulse 90. His hind parts were cold, that was to say the moisture running from them was practically cold. The fact that his temperature was elevated showed there were no symptoms of general collapse. He was in such pain he practically could not move. He could not urinate, and on examining him for iliac mischief, under the groin he found an imprisoned testicle. He removed it, and had since removed the other, and the animal was alive to-day. The owner said

the testicles were all right when he bought him, and it seemed to him that something must have upset the horse and affected his nervous system, and the testicle was in the rising or descending when it was caught in the inguinal ring.

Mr. HICKS quoted the case of a carrier's horse who could not put his off-hind leg to the ground. He thought at first it was thrombosis, and afterwards set a man on massaging the leg and gave the animal a physic ball.

The PRESIDENT: Was the stifle all right?

Mr. HICKS: Yes it was.

The PRESIDENT: Was it cramp?

Mr. HICKS: I thought it was suffering from an attack of acute rheumatism

The PRESIDENT: It might have been an attack of sciatica.

Mr. HICKS: He walked about a mile with his leg bandaged in cotton wool, and after a week's treatment he performed his journey to market.

Mr. R. W. CLARKE was reminded of the case of a hunter brought from South Africa. He would suddenly fall down on the road and then get up all right. He could find nothing to account for it. At a meet of hounds he rode it, and it came a cropper at the first fence, not from stumbling, but after landing. He never fell at a gallop, but always after a check. After the fall mentioned they pensioned him off.

The PRESIDENT produced some snap-shots of a four-year-old hunter supposed to have been injured by lightning, together with the pelvis of the animal. The history of the case, he said, was simply this. A claim was made on an insurance office, backed up by a veterinary surgeon's certificate, for alleged injury by lightning to the horse. The company then took the opinions separately of two other veterinary surgeons to ascertain the *bôna fides* of the claim. They found that the direct cause of injury was not due to lightning, but that the horse was suddenly knocked down in the dark by another horse or horses depastured with him, and the thigh joint and pelvis thus injured, and that the claim was void. Some ten months after this a number of neighbours of the owner of the horse formed a cabal, demanding compensation for the injured horse or they would discontinue their insurances. The horse was re-examined by the two veterinary surgeons on behalf of the insurance company and their previous opinion was confirmed. It was decided to have the horse killed, the company agreeing if there was no injury to the ligamentum teres or pelvis to pay the £40. He (Mr. Dickinson) made a post-mortem examination and found there was injury to the ligamentum teres within the hip-joint. He decided to have the pelvis boiled, and it was only after scraping the bone that a long fracture of the symphysis pubis was revealed, thus demonstrating that there was neither direct injury from lightning nor grounds to claim compensation.

JOINT-ILL IN FOALS OR PYÆMIC UMBILICAL INFECTION.

By Prof. PENBERTHY, F.R.C.V.S.

It is in response to the request of our President that I am here to-day to read a short paper on "Joint-ill in foals." At the outset I must make it clear that I am in no way responsible for the selection of this subject, or prepared with any fresh discoveries to reveal to you. At most I can only hope to introduce for your discussion a subject in which, as your selection indicates, you are particularly interested. Though I would thus endeavour to excuse myself and to set your expectations at a fair level, I feel that no apology is necessary from this meeting for considering a matter of such importance to ourselves, to the horsebreeder, and, indeed, to the nation. The disease is a source of much loss to individuals, and to no inconsiderable extent responsible for the shortage of horses, which is so generally deplored at the present moment. At the outset we may, I think, freely admit that at least in the matters of prevention and cure finality has not yet been arrived at.

It is usual, and sometimes useful, to enter on the consideration of a disease by referring to its nosology. A variety of scientific names often indicates a wide-spread existence in different parts of the globe and change of views regarding its intimate nature, while the use of numerous colloquial terms is commonly suggestive of an ancient recognition and a local or enzootic form of occurrence. It frequently happens that, as the latter are the outcome of actual observation, the vulgar name is less misleading than the so-called scientific. "Joint-ill," "Joint-evil," "Navel-ill," at least indicates something which is not wrong or misleading, while Scrofulous arthritis and Rheumatic arthritis are altogether beside the mark, and point both curative treatment and prophylaxis in the wrong direction. Omphalo-thrombo-phlebitis certainly suggests the navel, and is so far right, but like omphalo-phlebitis restricts the condition too exclusively to inflammation of the vein, which from its disposition in equines, may not be involved in joint-evil. Polyarthritis, though indicating affection of the joints, does this too exclusively. Pyæmia is fairly representative of many cases, while *Pyæmic umbilical infection* would appear to be correct and generally comprehensive. Occasionally one hears of pyæmic forms, and septicæmic forms. Strictly speaking, the latter is probably scarcely correct, as the micro-organisms mostly credited with inducing the disease rarely, if ever, induce septicæmia.

It is quite possible that there are included under the term Pyæmic umbilical infection other conditions besides that which, owing to changes in the joints, has become known as Joint-ill, for the navel wound is open to the entrance of any microbe which may perchance be introduced. It is therefore not very remarkable that in very young animals of all species a variety of conditions may be experienced as the result of navel infection. There is every reason for believing that the disease in the form most commonly encountered at the present time is nothing very new, and though before the birth of bacteriology the cause was obscure and afforded ground for curious and diverse views, some of its phases were recognised and recorded. *The Veterinarian* of 1832 contains a contribution by W. Pritchard, of Wolverhampton, which is not without interest to-day, concerning a destructive affection of sucking foals, which he had witnessed, in which "the joints are attacked with acute inflammation which by metastasis moves from one limb to another." However interesting the process might be, the limitation of time in these days, replete with fresh facts and theories, proscribe our journeying into the regions of ancient history.

Joint-ill we recognise as a condition resulting from the entrance of pus-producing organisms through the unclosed umbilicus, and most commonly manifested to us by changes in and about the joints. It is encountered in single cases sporadically, without any traceable relation to a previous case, and as an enzootic persisting on some studs, farms, etc., for indefinite periods. It is usually regarded as being more common among higher class animals, and certainly our personal attention has been more directed to its occurrence in breeding establishments, but undoubtedly very many foals succumb to the affection, which are not brought into the reckoning, owing to non-recognition of the nature of their complaint, or the acceptance of what is regarded as the inevitable—the death of the affected. Naturally the incidence of the disease is more likely to attract attention when valuable animals are affected, while when the

disease exists in an establishment where many foals are born, the numbers affected are likely to be greater there than under other circumstances. There are, however, other conditions which probably affect the occurrence in our large high-class breeding studs, and in this connection we may mention the congregating of mares and foals from many different sources for service of the stallion of the establishment. There is reason for supposing that the disease has thus been introduced from abroad by mares and foals returning thence.

Unfortunately our methods of horse-breeding do not, like those of our Continental neighbours, provide us with statistics as to this disease of foals, but from unrecorded observation we know that the affection usually manifests itself early after birth on an average of 10 to 20 days, that in the majority of cases the disease runs its course to a fatal issue within the next two weeks. A small proportion of the affected make an apparently complete recovery, a few make partial recovery only; rarely do animals which have given indubitable evidence of affection of the joints again become satisfactory. The earlier in life the symptoms appear the more rapid the course and more certainly fatal the termination. The appreciable evidence of navel infection is, however, sometimes delayed for months and may be manifested during adolescence.

In studying the etiology of such diseases it is customary to consider it under the head of predisposing and exciting. Joint-ill of foals has been so generally attributed to circumstances affecting the dam, in- and in-breeding, etc., that accepting the infective nature of the malady, we may perhaps be expected to make some reference to those views. The main predisposing cause is the existence of an open wound at the navel which allows of entrance of the infective matter. Any circumstance which retards the early healing of this opening must be regarded as increasing the chances of infection. We have noted that in a large proportion of cases (27 of 61) the affected foal was born before completion of the normal period of gestation. On three occasions the foal at birth had a swollen navel cord. It is within the range of possibility that constitutional disturbance of the mare may in this or some other way increase the opportunities for infection and growth of the microbe, but more than this, which we must not wholly disregard, we cannot associate with the system of the mother, though as a bearer of the exciting cause it is probable she plays an important part, which must not be neglected. The malady is found in a larger proportion of colts than fillies, a circumstance usually attributed to delay in closure of the umbilicus owing to soiling with the urine. The exciting cause of the lesions is a micro-organism undoubtedly in the great majority of instances pus-producing. A quarter of a century since unclassified cocci were observed, and the pathology of the disease independent of microscopy could leave no doubt of their existence. From the lesions, among other organisms, *Stayhyloccus pyogenes aureus and Streptococcus pyogenes* have been isolated. Both are commonly found when suppuration is going on: both are practically ubiquitous. The staphylococcus is constantly present on the skin of animals in water, the air, etc., is very resistant, lives a long time in dirt, etc., and grows at low temperature, though most luxuriantly at body heat. In the body it is usually confined to the lesions, and though often transported by the blood stream there appears no evidence of its multiplying there as do organisms which produce septicæmia. It is often found in purulent and muco-purulent discharges, in the womb affected with metritis and even in the pericardium in inflammation of that structure. It produces ferments which peptonise albumen and destroy red and white corpuscles. These organisms are facultative and do not necessarily proceed from some previous case of joint-ill. It will, however, be readily understood that any situation in which these organisms are discharged in inconceivable numbers from some suppurating part will be much more dangerous than another situation not so affected. It must not, however, be understood that the bacteriology of pyæmic umbilical infection is entirely settled, for some are still disposed to the view that besides these common pyogenic organisms a specific one is necessary to the development of the disease, others that the organisms named have by passage through the animal acquired special powers. From a practical point of view the settlement of this question may not be of vital importance.

As the exciting cause is very commonly regarded ubiquitous, and every animal immediately after birth has a wound at the navel, our attention must naturally be attracted to this as the port of entrance we are especially called on to guard. Its position under the abdomen lends it particularly liable to contamination, the nature of the exposed structures is apparently such as would favour the adhesion of dirt and the development of micro-organisms. It will be remembered that the navel string or umbilical cord extends from the amnion to the navel of the fœtus. The amniotic membrane ensheathing it enveloping the urachus, umbilical vesicle and vein, and two umbilical arteries, all of which are connected by loose fibrous tissue whose spaces are filled with a jelly-like material. It is customary to speak of an internal and external navel ring, the former the opening in the inner abdominal muscle and which is, as it were, obliterated by peritoneum; the latter the opening in the skin to which the urachus remains attached until absorbed or cast off by suppuration. When the cord is severed there are exposed to infection the thrombi in the umbilical arteries, the vein which is usually collapsed and contains little or no thrombus, the urachus which leads to the bladder, and the outer surface of the peritoneum. If pyogenic organisms gain access to the open navel they may excite suppuration in the connective tissue, pass directly to the peritoneum setting up peritonitis, to the urachus, whence they may reach the bladder, or what is even more serious and most common is settlement in the arterial or venous clot which they disintegrate, and after increasing in numbers the organisms get into the blood and are conveyed by the general circulation over the system, frequently settling in the joints or their neighbourhood. It is, however, not only in the joints that the organisms settle, for there is no part of the body in which they may not gain a settlement. As a consequence we find in different cases, both during life and at post-mortem, evidence of their activity in almost all situations. The manifestation of the micro-organisms will vary with the numbers and virulence and position in the body and suitability of the soil. In some instances many parts are affected at the same time and the process is acute, death occurring quickly. At other times there may be but few organisms, few lesions, and the activity of the microbe may be suppressed temporarily or permanently. Indeed the seeds now sown may probably remain in abeyance for considerable periods and owing to altered circumstances become very active and give rise to symptoms at periods so distant from birth that infection through the navel is not suspected. The cocci named are recognised as causing suppurative conditions in the horse quite apart from joint-ill.

We are not in a position to assert or deny that the organism which causes joint-ill is a specific or a common facultative microbe. It may be argued by those who regard the disease as dependent on some inherited predisposition that the vast majority of foals escape infection because they are born with defensive powers sufficient to master micro-organisms, while those which become affected inherit some special inability to resist. Accepting the view that the infective agent is a micro-organism, which is found practically everywhere it may be regarded remarkable that the number of foals affected

with joint-ill is not much greater than it is, considering the position and nature of the navel opening. However, admitting that some conditions favourable to infection and the development of the disease may possibly be transmitted by the dam the practical position remains the same, the exciting cause of the lesions enters by the navel, and certainly without this the disease would not occur.

Post-mortem examination of a large number of cases proves that practically any situation in the body may become the seat of lesions which, generally speaking, are associated with suppuration in the form of metastatic abscess or diffuse purulent inflammation. Sometimes the pus has a distinctly fœtid odour, possibly related to the necrosis of the umbilical vesicle or urachus. In the neighbourhood of the joints, in the tendon sheaths, etc., there is often found, especially in acute cases, infiltration with a yellow jelly-like material. At other times the matter may be purulent, thick and creamy, more liquid, or blood coloured. The cavity of the affected joints may contain similar material, or the synovia may be merely opaque and contain flakey material; the synovial membrane and articular cartilage exhibit a variety of changes, the latter in many cases being ulcerated and eroded, sometimes absent. Occasionally there is evidence of an abscess in the joints having burst and the pus infiltrated the surrounding tissues, while in the older cases the substance of the bones underlying the articular cartilage are sometimes extensively diseased. The joints of the limbs are probably more commonly the seats of the lesions than joints elsewhere. Some observers have found the knee and hock more frequently affected. My own observations have not indicated any special predilection joint. The atlo-occipital joint is not uncommonly involved. The membranes of the brain, the pleura, lungs, peritoneum, kidneys, cornea and skin may be found in a state of diffuse or limited suppurative inflammation. Abscesses in the liver and spleen are not so common as in cattle. The navel wound and structures may be inflamed, swollen, and suppurating. The navel itself is, however, often found healed externally, and in some cases the internal changes are not extensive or it may be healed externally with abscess internally, or suppuration may have extended to the peritoneum and affected the structures of the cord. The urachus, which may not be closed, often shows muco-purulent inflammation with blood extravasations which may extend to and involve the bladder, the cardiac muscles are usually pale and flabby, and the endocardium not infrequently involved in inflammation. Abscesses are sometimes found in muscles, glands, and connective tissues. Though this is by no means a complete description of what may be found in a series of cases, it is not intended to convey the idea that every case reveals the whole of the changes enumerated. Indeed in some instances the joints even appear to have escaped, and we have met with cases in which there were gross lesions only in the umbilical artery and the pia-mater. The thrombus in the umbilical artery is perhaps more constantly than any other situation affected by softening. The umbilical vein may be inflamed, but is usually collapsed, rarely contains appreciable clot. We have on one occasion been able to discover only affection of the tarsal joint and the mesenteric gland.

Symptoms.—The picture of post-mortem appearances will indicate that the greatest variety of symptoms may be manifested in different cases. It is, I am sure, quite unnecessary, indeed it would not be complimentary to your intelligence, to attempt to recount all the signs which might present themselves. Our experience best tells us of the depression, limpness, quick short panting breathing etc. which accompanies the febrile state in the young foal. Disinclination to suck and move, stiffness, lameness on movement and a marked disposition to lie down would always suggest the condition to our minds, while swelling at one or more of the joints, especially if successive, would probably satisfy us. There is nothing in a typical case to be differentiated. Examination of the navel is sometimes relied on and it is by some a *sine qud non* that the navel should be unhealed and in an appreciably diseased condition. By others open urachus and dribbling of urine are taken as synonymous with joint-ill. Certainly in some cases of pyæmic umbilical infection neither the navel wound nor the urachus have closed. The swollen, weeping, suppurating condition of the umbilicus is then most convincing. Sometimes, though this navel opening is closed, enlargement due to an abscess may be felt above. Diarrhœa is not unfrequently a prominent feature, but is by no means constant. Indeed in many cases there is no appreciable localisation of the lesion, and the navel may be closed and apparently healthy.

The age at which the manifestations are appreciable varies considerably, but though in a minority of cases these may be delayed for months after birth, in the great majority it is within the first three weeks, while it is believed to rarely or never occur earlier than the third day of extra uterine life. The symptoms may be very marked and acute and the course rapid, while in other instances, usually in the older, the symptoms may be subacute and the progress slow. In fact it is possible for pyæmic umbilical infection to have taken place, and only just a little *malaise* indicated by perhaps some slight dullness and not doing well for weeks or months, when lameness, swelling, or other evidence of local manifestation may appear. In a small proportion of cases spontaneous recovery may ensue, but one must on appealing to experience, to the nature of the disease, and the autopsies be unable to escape the conviction that the results must usually be serious, if not fatal.

Treatment.—This phase of the subject naturally concerns us particularly. I know of no more perplexing position than that of a veterinary surgeon, who is called and expected to cure cases of joint-ill affecting valuable animals. Unfortunately it is in the nature of things that our services are usually sought as healers of the sick, and notwithstanding our own recognition of our utter impotence to accomplish the task, it is often difficult to convince our clients that this is not due to any personal lack of skill or that the case is beyond the power of medicine. I have witnessed recovery in some few cases. In some this has undoubtedly been due to veterinary skill exercised in opening abscesses either in the muscles or in the neighbourhood of the umbilicus, careful disinfection of the parts, etc. In other cases where there was no evidence of localisation of the pyæmic process as part of a metastatic occurrence but an evidently affected suppurating navel, thorough cleansing and disinfection of the parts, general attention to the hygiene of foal and dam, and *vis mendicatrix naturæ* have apparently effected a cure. If there be an abscess in any situation which will admit of surgical opening without serious risk of producing permanent damage we can do little harm in opening and dressing it, and possibly we may affect some good. When suppuration has affected a joint we cannot in many cases justifiably look for recovery to usefulness. Indeed we must always be influenced by the knowledge that the great majority of subjects of pyæmia die from it sooner or later, while a proportion of such as recover are rarely worth the trouble and expense of the treatment. Indeed, as far as my observation goes, if metastasis has occurred, and affection of the joints is usually a sign of it, treatment of the umbilicus is not likely to improve the parts already affected, though it may possibly avert further infection and improve the health and chances of recovery. It has been frequently suggested that joint-evil is essentially a disease for the application of some form of serum or anti-toxin treatment. We can express no wonder that such treatment has not yet been successfully applied. Before this can be put on a

sound basis it is essential that we should have more precise knowledge of the organisms which cause the disease. Having discovered streptococci in the pus of two cases in the same stud, I used an anti-streptococcus serum on three future cases in the same stud. I regret to say my patients died without giving evidence of having derived any benefit from the treatment. Still it appears within the bounds of possibility that the future may reveal something of value, as it is already known that dead staphylococci increase opsonins, and injected into man affect the occurrence and course of acne. Of the value of medicinal treatment of the foal I have never been able to discover any absolute proof. The intertracheal injection of iodine, so highly vaunted as a remedy has signally failed under my observation. Cinchona, biniodide of mercury, iodide of potassium, bicarbonate of soda, hyposulphite of soda etc. have been included in the *régime* of many subjects of which I have made the post-mortem. Though I have thought the frequent dosing of young foals with medicinal concoctions has often expedited dissolution and thereby shortened suffering and expense, I am not in a position to say medicinal treatment is never beneficial in a curative direction. The local treatment of swellings with such expensive medicaments as belladonna, opium, etc., appeal to me more as evidence of the disposition on part of the practitioner to do good than of the good which is likely to accrue.

The treatment of the dam should be rational, that is such as to maintain her usual health.

Prophylaxis.—It is fortunate that we may turn to the consideration of the prevention of the malady in a more hopeful mood, for recognition of the true pathology of the disease would tell us on purely theoretical grounds that even though it is within the range of possibility for the causal agent to enter the young animals system by other portals, the usual entrance is at the navel. Successful measures must, I think, be based on the assumption that joint-ill is a contagious disease and that the contagium usually enters at the navel. It is now widely accepted that the causal factor is a common, ubiquitous microbe, but experience tells us that if this is so it must be much more common, more virulent, or more accessible in some situations and under some circumstances than others. These situations are marked by a recurrence of the disease year after year, and some circumstances indicate that the microbes are often, if not always, derived from previous cases of joint-ill. That this latter source of origin is common in the same season there can be no doubt, and it is of great importance in application of preventive measures that special regard should be paid to everything connected with previous cases. We have reason for thinking that the microbe is sometimes conveyed from one place to another by mares coming from studs in which the affection has been prevalent. Just before parturition the hinder parts, tails, genitals, thighs, udders should be thoroughly washed in soap and water and then treated with some fairly strong disinfectant; lysol and thymol have the advantage of being tasteless and non-irritant and not likely to injure the sucking foal. The application of such matters as boric acid, so innocous to pathogenic bacteria generally, with a view of killing resistant staphylococci is, I think, hopeless. Personally I advise rubbing a small quantity of white precipitate ointment which incorporates with the greasy material on the surface of the skin and so comes in direct contact with organisms there. This is one of the affections in the spread of which as a carrier of microbes the stallion may not be beyond suspicion. Of great importance is the foaling box, which I regard as a common harbour of the causal factor, hence I think the use of a common foaling box should be discarded and every mare should, if possible, foal in her own box. Under both conditions before a fresh case enters the foaling box for parturition, the box in which the foal is to be born should be thoroughly cleansed and disinfected. Sulphate of copper is probably cheapest and most effective. Clean bedding should be provided and maintained, everything possibly contaminated, including the attendant, should be brought into the same condition of cleanliness. The dangers of the foaling box may, however, be wholly averted by allowing mares to remain out and foal on the grass. The ideal life of the pregnant and foaling mare is in the open. Many successful breeders of high priced horses never house their brood mares even for foaling, and as far as I can ascertain practically escape this malady.

Though cases of joint-ill occur under a great variety of circumstances, my experience leads me to the conclusion that it is least common amongst animals which are interfered with least. At least until the navel wound is healed it is preferable to keep each mare and foal separated from others. Any indication of joint-ill should be the signal for their removal from proximity to pregnant mares and other mares and foals, while particular attention must be given to disinfection and preventing attendants from mixing with the affected and the non-affected. Everything possible having been done to ensure a thoroughly pure reception of the foal on its entry into the world, on its arrival attention should be directed to prevent contamination of its umbilicus. An ideal method of assuring this is that laid down by Gmelin. This entails being present at the birth and arranging that the navel cord be preserved intact. The cord is then soaked in some antiseptic as, sublimate solution, tied with a ligature, which has been steeped in the same, about ½ inch. to an inch. down the amniotic sheath. It is advised that the ligature at first just compress the part until pulsation cannot be felt, when it should be tightened and tied, and the cord severed below the ligature with a clean scissors. The stump is then washed in sublimate solution, and that part within the amniotic sheath brushed over with pure carbolic. On the following day the foal is cast, the hairs about the navel cut off and the part washed in sublimate solution, the cut surface being again treated with pure carbolic acid. This is usually repeated daily for four or five days, and it may be found necessary to remove and renew the ligature on the first occasion. Usually within a week the external remnant of the navel cord is dry and shrivelled, and transverse cracks appear close to the skin at the outer ring. This remnant may be excised with scissors, bleeding arrested, and the part disinfected and dried, when a stiff zinc gelatine dressing, in which 1 per cent. of corrosive sublimate is dissolved, is painted on the wound. The addition of wood-wool fibres makes a strong adhesive charge which remains in position for from 1-3 days. The retraction of the vessels inside causes a depression or sunken spot in the navel wound, which after being dressed with the same care for two or three days (iodoform being inserted into the depression) becomes filled up and the navel healed. This is an elaborate process and entails more care and trouble than it is often possible to secure in practice, but there can be no doubt about its being effectual, and if only one valuable foal in a stud could be saved yearly the trouble and cost would be recompensed for. In establishments where this has been rigidly adopted and carried out the losses have dropped from 5 to 12 per cent. to nil. It usually occupies an hour to dress eight foals. What has been described is thorough antiseptic treatment, and it is the only procedure which can be absolutely relied on. It does not, however, follow that a modification of the process would not in the great majority of cases prove successful, and be of great benefit. It cannot always happen that one would be able to prevent rupture of the navel string. To tie the cord and possibly imprison micro-organisms within the sheath is an almost certain method of ensuring the occurrence of the disease from which the subject might

have escaped by discharge of pus through the navel opening if this had not been tied. It is therefore necessary to employ measures such as we have suggested for destroying the *causa causans*. I am cognisant of the fact that the carrying out of this ideal treatment is rarely practicable, but we should at least aim high, and in some cases it can be adopted. Very soon after Gmelin published particulars of his method and his absolute success, I was able to secure approximately its adoption in a valuable stud, which had suffered more severely than those reported by Gmelin—and with an equally successful result. Prevention, however suicidal, may be the part we play in urging it, is the direction in which our advice and activity should be directed. Improved sanitation is advisable and essential from every point of view, but our aim must be nothing short of destruction of the germs of the disease or closing the port of their entrance. Perfect asepsis is a high ideal, one often very difficult to attain in our practice, but the nearer we approach it the greater security will our patients enjoy. I have witnessed great, and may say complete, success following strict attention to the disinfection of the mare, boxes, attendants, etc., and the tying and disinfection of the navel cord after rupture by an intelligent stud-groom who also dusted on the wound after ligature iodoform powder. I can also report material diminution in the number of cases where strict disinfection has been carried out and the navel not tied but cleansed with antiseptic lotion as tincture of iodine, and sprinkled with a disinfectant powder. It is, however, important to bear in mind that unless the operator is punctilious as to disinfection his interference may be productive of harm rather than good.

I cannot conclude my remarks without drawing attention to another class of case or possibly manifestation of the same malady, one which certainly has sometimes been included under the head Joint-ill. It has on different occasions come within my cognisance that abortion in mares and pyæmia in foals have been coexistent in the same stud. My notes, extending over 15 years, during which I was frequently in consultation concerning abortion and joint-ill, in pedigree stock, indicate that in a considerable proportion of cases the subjects of joint ill were born considerably before completion of the normal period of utero-gestation, while inability to stand, "knuckling over," and general inability to use the limbs were sometimes noticeable at birth, within a few hours of which considerable swellings appeared at the joints. There is no room for doubting that in such cases infection occurred *in utero*. Every foal so affected died within a few days In the cases proving fatal soon after birth autopsy revealed gelatiniform material in and about the joints. In one instance, that of a colt foal, which died two days after birth, there was a considerable abscess at the stifle joint from which an organism was cultivated. Injection of the culture into the jugular of an apparently healthy colt of five months old was followed by polyarthritis. Unfortunately the cultures of this organism died out before another opportunity of testing it occurred. The identity of the micro-organism was unfortunately not established. It is well known that streptococci are found in the discharges of suppurative metritis. We have more than once observed simultaneously metritis in ewes and joint-ill in lambs. In such cases irrigation of the uterus with disinfectants should be carried out. These observations, too, suggest the desirability of directing attention to the cleansing of the genital passages of the mare after parturition, during pregnancy, and immediately before delivery where there is reason for thinking joint-ill is imminent. Many cases of pyæmic umbilical infection show the earliest symptoms so soon after birth that it seems probable infection may occur before or during parturition.

Joint-ill must be dealt with as a contagious disease, and the navel as the usual port of entrance of the micro-organisms causing it. Experience tells us that this disease is preventable by the adoption of antiseptic measures. Undoubtedly perfect asepsis is not always attainable, possibly it is not always necessary. I, however, venture to express the view that it is necessary for us to realise the power we possess and to impress the fact on our clients. That the carrying out of details involves trouble and expense should not concern us farther than to show that the process must prove economical.

Discussion.

The President, in inviting discussion, said it was a most valuable paper on a most valuable subject to veterinarians.

Mr. R. Bett, in thanking Prof. Penberthy, said the subject was a most interesting one to country practitioners. He remembered his father losing a lot of lambs on the farm, and he suggested as a method of prevention that the shepherd should wash his hands and use an antiseptic lotion, and there was very little loss after that. They lost lambs through a good many causes: they were silly, and often would not suck. The organism of joint-evil was metastatic, and it might travel to the brain and affect it. He thought if farmers would elect to see a V.S. more often in the season they would profit by it. He was strongly in favour of preventive measures, and suggested the use of an antiseptic dressing for the navels of newly-born foals.

Mr. R. W. Clarke was very pleased to say that in a stud of which he had charge they had practically wiped out foal-ill by preventive treatment. As soon as a mare came in season they washed the vagina out. Formerly he used Permanganate of potash, now he used Chinosol. All through pregnancy twice a month they had the genitals washed. Then they used an antiseptic dressing for the foals. They also washed out all premises. It was some years since he saw joint-ill in the stud, where they used to lose 20 out of 40 foals. They had also stopped other bacterial diseases, but not abortion. Some believed in treating the mares as well as the foals. He gave the mares hyposulphite of soda twice a day, and had had great success with mares and foals.

Prof. Penberthy said that Prof. Gmelin's treatment which he had given had proved to be an absolute success. He knew the difficulty of dealing with the matter, the V.S. should be present at the time of foaling.

Mr. Marshall: The difficulty is you cannot get farmers to help themselves.

The President: No, we all know that.

Mr. Marshall said he knew a farmer who used to lose his foals, but now he called in veterinary assistance he had live foals to-day.

Prof. Penberthy again pointed out the absolute necessity of the closest attention to the navel, and said they should aim at the very highest ideals in antiseptic treatment. He had seen disastrous results from tying the navel by a person who did not know what disinfection meat. They forgot that enormous numbers of the micro-organisms that caused the mischief could be put on a pin's head. As Mr. Bett had said washing of the hands even had a good effect.

The President said he knew a district where this navel-ill presented itself in the form of dysentery in calves, and the same people had a similar difficulty with their foals. He suggested the removal of the animals, particularly the mare, to another farm eight or nine miles distant, and even the change of locality was sufficient to immune the foals from joint-ill. They had been in the habit of using the same boxes the foals were foaled in for the cows to calve in, but he suggested that they be washed and disinfected, and the heifers and

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mares put in their own boxes, and they had never had a case of joint-ill since. After tying up the navel it should be dressed with Iodoform. He knew a case where one foal was affected, and two others in the same field also contracted the disease.

Prof. PENBERTHY: But through the navel?

The PRESIDENT: Yes, they were all in the same field. In three weeks all three had thickened joints.

Mr. HICKS advocated antiseptic measures, and thoroughly cleansing and disinfecting the navel. At one famous stud his father insisted on the men wearing disinfected clothes. He had had the best results from passing a needle in three directions round the navel, then ligaturing it, and then disinfecting it.

Mr. BINDLOSS said he found Iodide of potassium good for the mare, while chemical food was good for the foal, and he gave syrup of iodide of iron.

Mr. SHEFFIELD said he used Iodoform in eight parts of boracic acid as a navel dressing.

Prof. PENBERTHY expressed his pleasure at listening to the discussion, and said he was glad to find the advance that had been made, and the scientific measures adopted in that part of the country. He was sure the breeding of horses was very much improved by it. When anyone stood before such a scientific assembly as that they must take a high ideal, they could not take a middle course, it could not be carried out, in 99 cases out of 100 perhaps, but any approach to it would be to the advantage of the breeder and the practitioner. There had been a great disposition in the past to centre the whole attention on the mare and disregard the foal, which was merely given a tonic, unless he had to be treated for peritonitis or other ailments. He urged, however, that they must commence with the young animals if they would deal successfully with micro-organisms. Great faith in Hyposulphite of soda had been expressed and it was surprising that the veterinary profession had had up to now a monopoly in the curative use of this agent. He would like to see it given a fair trial by the medical profession, and he would like to hear the results of some physiological tests. He did not think they could eradicate joint-ill through the blood of the mother, but they might by the antiseptic treatment of the foal's navel; at any rate sanitation, would do much to mitigate the evil.

On the motion of Mr. Bindloss, seconded by Mr. Hicks, a hearty vote of thanks was accorded Prof. Penberthy for his very interesting paper, the latter gentleman, in reply, expressed the pleasure he felt at meeting so many old friends.

The President was also thanked for his services in the chair, and his specimens, on the proposition of Mr. Betts, seconded by Mr. Sheffield, and an adjournment was made for "high tea," very daintily served by the hostess of "The Albion."

THE CENTRAL VETERINARY MEDICAL SOCIETY.

The Annual General Meeting was held at 10 Red Lion Square, on Thursday evening, October 1st, Mr. J. Willett, President, occupying the Chair.

The following Fellows were present:—Messrs. W. S. Mulvey, Arthur L. Wilson, P. W. Dayer-Smith, R. J. Foreman, Alex. A. Johnson, Sydney H. Slocock, W. R. Davis, Prof. J. Macqueen, A. Rogerson, W. Perryman, Prof. F. Hobday, W. Roger Clarke, A. L. Butters, E. Lionel Stroud, G. W. Bloxsome, and Hugh A. MacCormack, Hon. Sec. Visitors, Capt. J. R. Steevenson, Messrs. E. S. Martin, and L. S. Slocock.

On the motion of Mr. P. W. Dayer-Smith, seconded by Mr. Mulvey, the Minutes of the last Annual General Meeting were taken as read and confirmed.

CORRESPONDENCE.

The HON. SECRETARY announced that he had received a letter from Captain Southey informing him that he was going abroad on foreign service, and therefore resigning his Fellowship of the Society. He had written in reply stating that officers of the Army Veterinary Department who were Fellows of the Society remained Honorary Fellows during their absence on foreign service.

The HON. SECRETARY also announced that he had received letters from Mr. T. G. Batt and Mr. Elmes resigning their fellowship; and on the motion of Mr. P. W. Dayer-Smith, seconded by Mr. Mulvey, the resignations were accepted with regret, and a telegram regretting inability to attend from Mr. J. C. Coleman.

Capt. J. R. STEEVENSON, A.V.C., Chatham, and Mr. GEORGE J. BELL, M.R.C.V.S., 2 High Street, Wandsworth, S.W., were balloted for and unanimously elected Fellows of the Society.

Prof. MACQUEEN desired to bring before the Fellows two points which, if thought of sufficient importance, might be referred to the new Council for consideration. The first was with regard to the lighting of the room in which the meeting was held. He believed the Central Society was the chief occupier of the room while the gas was lit, and he thought every member must have noticed how frequently the room became almost unbearably stuffy, due to a very great extent to defective ventilation but mainly to the system of lighting employed. The Society might not be very rich, but he thought it was rich enough to go the length of defraying the cost of an electric light installation. Seeing that the authorities which supplied the light would lay in the supply, all that would be necessary would be for the Society to defray the cost of the wiring and the necessary fittings. He suggested the Council should consider the matter, and then approach the R.C.V.S., who he thought would offer no objection to such an improvement being carried out.

The second point he desired to bring forward was, that he thought it would add to the interest and instruction of the members who met together from month to month if a change were made in the mode of conducting the discussions. There must be a very large volume of information resident in the members who sat round the table, but a great many of them never spoke at all. In order to induce the majority of those present to take part in the discussions and assist in the general dissemination of information, he suggested to the Council that a scheme should be drawn up which would enable certain subjects to be discussed on the spot without preliminary notice. The scheme might be worked in the following way. The Council would select a dozen or twenty subjects which could be placed in the ballot box; and on an open night, when there was no paper to be read, the President could draw from the box one or two papers and call upon a member to open the discussion. In that way he thought a great many members would assist in placing their experience before the members on a particular subject. He thought his suggestion was worthy of consideration as a mode of tapping the information which might be obtained if the members present could only be induced to take part in the discussions.

The PRESIDENT said he was cordially in agreement with Prof. Macqueen's remarks. With regard to the lighting of the room, he understood the question was under the consideration at the present time of the Council of the R.C.V.S., and if that body was prepared to pay the necessary cost he thought it would be better that the Society should not make any offer, unless they were asked whether they would be inclined to help. He took it that course would meet with the support of the whole Society. With regard to Prof. Macqueen's sug-

gestion, he trusted that gentleman would allow himself to be nominated again to the Council in order that he might bring the views expressed before their notice at the next meeting. He was sure Prof. Macqueen would have the support of the Council.

On the motion of Prof. Macqueen, seconded by Mr. Slocock, the suggestions raised by Prof. Macqueen were referred to the Council for their consideration.

Mr. FOREMAN suggested for the consideration of the Council that a time limit should be imposed on Fellows making speeches in the course of the discussions. Occasionally fellows spoke for twenty minutes or half an hour. He thought they ought to be able to say everything necessary in ten minutes or a quarter of an hour.

Mr. JOHNSON seconded the suggestion, that the matter be referred to the Council for consideration.

Mr. PERRYMAN disagreed with Mr. Foreman's suggestion. It was not so often, he said, that such lengthy speeches were made that the Society could afford to dispense with them, in fact there was a great reluctance on the part of many Fellows to speak at all, and if a time limit were imposed the proceedings would be cut short. He thought the matter might be left to the discretion of the President for the time being.

The resolution was then put and carried.

ANNUAL REPORT AND BALANCE SHEET.

The SECRETARY read the following Annual Report :—

Mr. President and Gentlemen,—The Council have great pleasure in announcing that the late Session 1907—1908 has been a singularly successful one. Seven Fellows have been elected, four have resigned. We very much regret that we have lost by death during the past year Colonel Nunn and Mr. Wragg. The former gentleman, as you will remember gave to the Society some valuable papers, and while in England was a constant attendant at the meetings; Mr. Wragg, we think we are correct in saying, was one of our oldest Fellows and had occupied the Chair: he was also one of our Trustees.

The Annual Meeting was held in October, at which Mr. J. Willett was unanimously elected President.

Ten ordinary and two Council meetings have been held with an average attendance of the former of thirty-seven.

In November the annual dinner was held at the Holborn Restaurant. Sixty-one attended. Mr. J. Willett gave his Presidential address at this meeting.

We have to thank the following gentlemen for reading papers during the Session, and the discussions arising therefrom have been most beneficial :

Mr. Wm. Hunting, on "Colic."

Mr. A. A. Johnson, on "Spavin."

Mr. Ainsworth Wilson, on "Tuberculosis in Dairy Cows, with special reference to the Udder and the Tuberculin Test."

Mr. J. C. Coleman, on "The Meat and Milk Supply."

Prof. F. Hobday, on "The Utility and Practical Value of Morphia as an aid to Canine Surgery." Two operations were performed before the Fellows at the Meeting.

Vet.-Capt. C. H. H. Jolliffe, 1st Life Guards, "Some Clinical Remarks concerning Lameness as affecting the Fore-Limb in the Horse."

Your President and Mr. P. S. Howard represented the Society at the Congress of the Royal Sanitary Institute held at Cardiff. Messrs. Sidney Villar and Lionel E. Stroud represented the Society at the Congress of the Royal Institute of Public Health at Buxton, and their respective reports will be given in due course.

Your Council beg to thank the following Fellows for specimens exhibited at the meetings: The President, Prof. F. Hobday, Messrs. N. Almond, G. Upton, W. R. Davis, R. Wall, and A. E. Willett.

The balance brought forward and receipts for the current year amount to £185 1s. 3d. (we have deposited £50 in the bank), and the expenditure £70 7s. 4d., leaving a balance of £64 13s. 11d., which the Council hope you will agree with them, is of a satisfactory nature.

On the motion of Prof. Macqueen, seconded by Mr. Mulvey, the report and balance sheet were received, and discussion was invited upon them.

Mr. ROGERSON, in moving that the report and accounts be adopted, thought that, so far from it being possible to criticise them, they were of such an exceedingly satisfactory nature that the Fellows were sincerely to be congratulated on their contents. The year had been a very successful one, while the amount standing to the credit of the Society was eminently satisfactory.

Mr. A. L. BUTTERS seconded the motion, which was carried unanimously.

On the motion of Mr. MacCormack, seconded by Mr. Mulvey, Messrs. Stroud and Bloxsome were appointed scrutineers of the ballot for the election of officers.

ELECTION OF OFFICERS.

The PRESIDENT said he had much pleasure in proposing that Prof. Hobday should be elected the President of the Society. (Cheers) He thought if Prof. Hobday were elected it would be acceptable to the whole of the Fellows, as that gentleman had done a great deal of work from time to time on their behalf. (Cheers).

Mr SLOCOCK, in seconding the motion, said he felt sure Prof. Hobday would make a most excellent President.

Mr. ROGERSON supported Prof. Hobday's election.

There being no other nomination, the President declared, amid cheers, that Prof. Hobday was unanimously elected President of the Society for the ensuing year.

In the absence of Prof. Hobday, it was resolved that the retiring Presibent, Mr. Willett, should occupy the chair until Prof. Hobday's arrival.

Vice-Presidents.—Prof. MACQUEEN, Messrs. J. WILLETT, WM. HUNTING, and A. ROGERSON were duly nominated as the four Vice-Presidents, and there being no other nominations the Chairman declared them unanimously elected.

Council.—The following gentlemen were elected :—Messrs. R. Porch, Sidney Villar, Sydney H. Slocock, Prof. G. H. Wooldridge, R. J. Foreman, A. L. Butters, W. L. Harrison, W. Perryman, W. S. Mulvey, G. H. Livesey, A. E. Bayley, J. Rowe.

During the ballot for the election of Council Prof. Hobday arrived, and the retiring President, Mr. Willett, immediately proceeded to vacate the chair in his favour. Before vacating the chair, he said he should like to thank the Fellows for the whole-hearted support they had given him during his year of office. Twelve months ago he accepted the highest honour they could confer upon him with a certain amount of diffidence, but he had tried not to allow the affairs of the Society to suffer, and he thought he could flatter himself that the past year had been a fairly good one. More especially he wished to thank the Hon. Secretary and Hon. Treasurer for the kindly help they had given him, and as one who had now passed the chair he could inform the members that they could not have two better officers than those two gentlemen. (Cheers). In inducting Prof. Hobday to the chair, he desired to congratulate him on his election.

The chair was then vacated by Mr. Willett, and taken amid hearty cheers by the new President, Prof. Hobday.

The PRESIDENT (Prof. Hobday) thanked the members very much indeed for the great honour they had done him in electing him President of the Society. He knew he had rather a hard task to fulfil in following such a President as the one who had just vacated the chair, but he would do his best to conduct the affairs of the

Society in the same able manner in which he had done. (Cheers).

Hon. Treasurer.—On the motion of Mr. Mulvey, seconded by Mr. J. Willett, Mr. STROUD was unanimously re-elected Hon. Treasurer.

Mr. STROUD, who on rising to reply was received with cheers, thanked the Fellows very much indeed for the confidence they had again reposed in him by electing him Hon. Treasurer for the ensuing year. It was not a very arduous office, but it kept one in touch with the working of the Society. It was just nine years since he first took office in the Society, in which he took an increasing interest, and any work he could possibly do to help forward the Society he would be only too pleased to undertake. (Cheers).

Hon. Secretary.—Mr. J. Willett said he had very great pleasure in proposing that Mr. H. A. MACCORMACK be asked to continue in the office he at present so well filled. (Cheers.)

Mr. PERRYMAN seconded the motion, which was carried with acclamation.

Mr. MACCORMACK, who was received with cheers on rising to acknowledge his re-election, thanked the Fellows for their kindness in again re-electing him to the position he at present occupied. He had thanked them so many times before that he had not words with which to fill the gap again, so that they must take the will for the deed. Before sitting down he desired once more to repeat the old, old cry of "more papers." There were many gentlemen present who had not yet read a paper before the Society, and he hoped that many of them would, during the coming Session, break the ice and give the other Fellows the benefit of their experience. (Cheers.)

Auditors.—On the motion of Mr. MacCormack, seconded by Mr. Mulvey, the retiring auditors, Messrs. W. L. HARRISON, representing the Council, and Mr. P. W. DAYER-SMITH, representing the Fellows, were unanimously re-elected.

Trustee.—The PRESIDENT intimated to the Fellows that the Council at its last meeting unanimously elected Mr. BUTTERS to fill the office of Trustee in the place of the late Mr. Wragg. Under Rule 21 that appointment would require confirmation at the next Council meeting.

Dinner Committee.—It was unanimously resolved that Messrs. PORCH, WILLETT, and ROGERSON should act on the Dinner Committee, together with the officers of the Society.

VOTE OF CONDOLENCE WITH MRS. WRAGG.

Mr. WILLETT proposed that a vote of condolence should be sent to Mrs. Wragg, deeply sympathising with her in the sudden death of her late husband.

Mr. STROUD, in seconding the motion, said all the Fellows deeply felt the loss they had sustained in Mr. Wragg's death.

The resolution was carried in silence, all the members upstanding.

Mr. BUTTERS thought the members should not part without recording their opinion of the manner in which Mr. Willett had conducted the business of the Society while he occupied the Chair. The report and balance sheet bore ample proof of the considerable amount of work that had been done, and the happy way in which their past President had conducted the business of the meeting showed that he had devoted considerable thought and ability to the duties which devolved upon him. He therefore thought the least the Fellows could do was to accord him a hearty vote of thanks for the admirable way in which he had carried out his duties. (Cheers.)

Mr. ROGERSON seconded the motion, which was carried with acclamation; and Mr. Willett having briefly acknowledged the compliment, the meeting terminated.

HUGH A. MACCORMACK, *Hon. Sec.*

TRANSVAAL VETERINARY MEDICAL ASSOCIATION.

GLANDERS AND ITS ERADICATION.*

By C. E. GRAY, M.R.C.V.S.

Principal Veterinary Officer, Department of Agriculture.

It is not my intention to enter minutely into the pathology of this disease, as the time at our disposal is limited, and I feel that it may be more profitably devoted at this meeting to commenting on methods of eradication, but a few preliminary remarks on the disease and its characters are here offered by way of introduction.

Glanders is a contagious disease caused by the bacillus mallei, first described by Löffler and Schutz in 1883; this organism is about the same size as the tubercle bacillus, and is not readily demonstrable in the local lesions of equine glanders, although it may be recovered from such lesions by the inoculation of a guinea-pig with material therefrom.

The organism of glanders grows freely in sterilised potato, on which the colonies develope in such a typical manner that they can be readily recognised by the naked eye characters. Describing such cultures Nocard says "in potato the bacillus forms thick pasty growth, moist, shining and viscous, presenting after a few days a fawn colour, which soon deepens into adistinct chocolate.

Glanders is a disease common to the donkey, horse, and mule, and communicable also to man and to the dog and cat, and to certain other animals by inoculation. Bovines were originally believed to be proof against infection, but it has recently been shown that their inherent immunity can be broken down by repeated injections of large doses of cultures of the specific bacillus. In the ass the disease runs an acute course; the mule is probably midway in susceptibility between the ass and the horse, while in man the disease, although usually acute, may occasionally assume chronic form, in which the disease is almost invariably fatal.

The disease is generally spread by ingestion of food or of water contaminated by the discharges of infected animals, or the accidental inoculation of abrasion or external wound by infective material. Some authorities, however, maintain that the disease is most frequently contracted by inhalation of bacilli suspended in the atmosphere in the form of dry dust (Froedberger and Fröhner), but this is doubtful, and recent observations strengthen the view that infection by way of digestive tract is probably the most common manner in which it is spread, and that the infection of the lungs which takes place in those cases is not due to the bacillus reaching the blood streams by way of the chyle vessels, the thoracic duct and the anterior vena cava, as was originally supposed, but is generally secondary to the establishment of centres of infection in the lymphatic glands of the mesentery. In experimental cases of infection by ingestion under conditions more or less analogous to those in which infection naturally takes place by the alimentary tract, it has also been observed that contamination of the upper air passages, that is to say of the mucous membrane of the nose and larynx frequently occurs, probably as a result of glanders bacilli lodging in the pharyngeal follicles. In my opinion this theory of infection has much more to recommend it than the inhalation theory.

In glanders the period of incubation is short, and may be put down at from four to six days, after which interval

* Read at the meeting at Johannesburg, June 27.

the disease may take on chronic characters, may become acute, or may remain latent for months or even years.

Acute glanders is a disease of short duration, death generally occurring within a fortnight of the date upon which the animal is first noticed to be ill. In this form the attack is generally ushered in by symptoms of a chill, there is a marked elevation of temperature 103 to 105 F., the animal is visibly out of sorts, is unwilling to move, probably on account of muscular pains, and is disinclined to eat, the eyes are injected and a nasal discharge makes its appearance, at first mucoid but later purulent and frequently streaked with blood. The nasal mucous membrane, becomes the seat of the following changes: small discrete nodules of a greyish red colour appear upon its surface, these rapidly break down and become converted into shallow unhealthy looking ulcers, frequently covered with a dirty yellow crust. These ulcers frequently become confluent and sometimes extend till they cover the greater portion of the visible mucous membrane, in addition to developing higher up in the nasal cavity, and so rapidly does this process go on that persons unacquainted with the character of the disease are frequently taken by surprise by the suddenness with which these ulcers develope and extend. As the ulceration progresses the breathing becomes interfered with, and is frequent, laboured and noisy. The changes in the nasal mucous membrane may be evident in one or both nostrils, and are accompanied by swelling of the submaxillary lymphatics, indurated glands, which are at first somewhat sensitive, but which rarely suppurate, and at the same time the facial lymphatic vessels may become corded, and small unhealthy sores may make their appearance along their course; coincidently with the development of these there may be swelling of one or more of the limbs, cording of the lymphatics of the swollen limb, and a formation of sores thereon. As the disease progresses emaciation becomes more marked, the breathing becomes more difficult, and the animal ultimately dies from exhaustion.

On post-mortem the changes set up by this disease will be found to be most pronounced in the nasal chambers, in the larynx and trachea and in the lungs. In the first we frequently find general congestion of the mucous membrane with ulcers similar in character to those seen in the nostrils during life, lesions of a like nature may be present in the larynx and trachea, while the lungs are generally the seat of inflammatory changes which have led to the formation of tubercles, which are sometimes scattered through the lung tissue in considerable numbers. These tubercles are generally about the size of a lentil seed, having a yellowish centre and greyish glistening circumference, surrounded by a ring of congested lung tissue, but if the disease has lasted any length of time the peripheral zone of congestion will probably have vanished in the case of the older tubercles. In this case these older tubercles will be found to possess a distinct capsule of fibrous tissue and to have become opaque, dryer, of a greyish-yellow appearance, but according to Schutz they never become the seat of calcareous changes like those observed in cases of tuberculosis. This characteristic of glanders tubercles also serves in the opinion of this observer to distinguish them from the greyish translucent nodules occasionally found in the lungs of horses, which are sometimes mistaken for glanders tubercles, but which are the result of parasitic infection, as the latter nodules ultimately undergo calcareous degeneration. Glanders tubercles are also sometimes found in the pulmonary lymphatic glands, in the spleen and liver, in the mesenteric lymphatic glands and occasionally in the kidneys, and in all of these localities they present appearances similar to those tubercles found in the lungs.

Chronic Glanders.

In chronic cases of glanders the disease runs a much more protracted course.

Animals suffering from chronic glanders frequently live for months and even for years, and under certain climatic conditions, when the air is dry, the temperature equable, and the hygienic surroundings are not particularly unfavourable, affected animals remain in good bodily condition for a long time, and occasionally show an apparent tendency towards recovery. This sometimes happens in South Africa, and the appearance of some of the cases of chronic glanders which we sometimes see in this Colony is somewhat misleading to inexperienced practitioners, who have conceived a mental picture of cases of chronic glanders altogether different from that sometimes presented by these animals. Such cases, however, like all other cases of chronic glanders, sooner or later break down and terminate in an acute attack, and, even if the law allowed, it would not be worth anyone's while to take one of these animals in hand in the hope of effecting a cure. Chronic glanders usually develops slowly, and it may be that the first symptom that anything is amiss with the affected animal is the appearance of a nasal discharge, which may be bilateral but is more frequently unilateral. This discharge may at first resemble that of common catarrh, but as time goes on it becomes more tenacious and adhesive, somewhat resembling boiled starch, and is occasionally streaked with blood. Examination of the nasal mucous membrane in such cases generally reveals the presence of nodules or ulcers similar to those described as being present in acute glanders; these cannot, however, always be seen even with the aid of a speculum, as they are sometimes situated high up in the nasal cavity, occasionally on the mucous membrane covering the convolutions of the ethmoidal bones, but if blood is present in the nasal discharge the existence of ulceration must always be suspected. The ulcers in chronic glanders present a similar appearance to those found in acute cases, but they extend more slowly, and occasionally a process of cicatrisation goes on at the same time, leading to the formation of stellar cicatrices, which persist to show where the ulcers have been.

As a consequence of the inflammatory process taking place in the nasal chambers, the submaxillary lymphatic glands become swollen and enlarged on one or both sides. These glands, although at first somewhat tender, become indurated and insensitive, adherent to the edge of the lower jaw, and feeling to the fingers almost as if they were packed with shot. Affected animals almost invariably suffer from a cough, which may be persistent if ulceration of the larynx mucous mucous membrane is present to any extent.

In other cases of chronic glanders the changes in the nasal mucous membrane may be absent, but the animal may be unthrifty in appearance and suffer from a chronic thirst; diffuse swellings may form on the sides of the chest or abdomen or on the inner surface of the limbs, which subside leaving behind them swollen and corded lymphatic vessels, along whose course the buds and buttons of chronic farcy make their appearance. Occasionally, however, isolated nodules form in various parts of the body without any antecedent swelling of the surrounding parts, these nodules soften, discharge an unhealthy looking pus, are not inclined to heal, and by the appearance of successive crops of buds with cording of the intervening lymphatics, there is built up that picture of the clinical case of chronic farcy or cutaneous glanders so familiar to the student of veterinary pathology.

Little more need be said regarding chronic glanders, as the description I have already given of a case of

acute glanders is sufficient to indicate how chronic cases terminate.

Latent Glanders.

Having dealt briefly with acute and chronic glanders, I will pass on to the consideration of latent glanders, and to the steps to be taken for the eradication of the disease.

By latent glanders I mean cases of glanders in which no definite clinical symptoms are presented which might guide us in our diagnosis, and as some animals suffering from latent glanders are to all appearance in the best of health, it would be beyond our power to pick out every infected animal in the case of an outbreak, if we had to depend on our powers of observation alone.

It is true of course that in a certain number of cases of latent glanders the existence of the disease may be suspected, as for instance, when we come across a horse which has an unthrifty appearance, which suffers from chronic cough, is easily fatigued, which has a chronic thirst, fickle appetite, and which suffers from polyuria, but none of these symptoms are diagnostic, and I venture to think that no veterinary surgeon would care to assert that an animal presenting all of these symptoms was suffering from latent glanders, no matter under what circumstances it was found. Since the introduction of the mallein test, however, our task has become much less arduous, and by the assistance of this reagent it is now possible to stamp out an outbreak with comparative ease and certainty.

Mallein, which was first prepared in 1891 by Kalning and Hellmann, is made in the following manner. A culture of the Bacillus mallei is grown for three or four weeks in glycerine bouillon, is sterilised in an autoclave at 115 C., and then filtered through a Chamberland filter, the resulting filtrate being mallein.

The value of mallein as an aid to the diagnosis of glanders was for a long time a matter of dispute, and great divergence of opinion existed on this point, particularly in France, where the profession ranged itself under the banners of Nocard and Leblanc, and conducted a wordy warfare which was not always distinguished for its moderation. On the one side Nocard exaggerated its value somewhat, as he rather favoured the theory that mallein was not only infallible as an aid to diagnosis, but also was inclined to credit it with the possession of therapeutic properties: while on the other hand the arguments of his opponent, Leblanc, are more remarkable for their ingenuity than for their consistency. In the eyes of the latter mallein was not only worthless, but even dangerous, and in the course of his early investigations Leblanc's methods of arriving at a diagnosis of the character of lesions found on post-mortem of a suspect, which had been subjected to the mallein test, seem to have been made in a manner which is not calculated to inspire the reader with much respect for his impartiality. For example, in some instances where post-mortems have been made on non-reacting animals, or on animals that had ceased to react, in spite of the fact that the result of experimental inoculation gave negative results, Leblanc appears to have have had no hesitation in pronouncing the lesions to be those of glanders from their macroscopic characters when it suited hi spurpose to do so; while in other cases when lesions of an uncertain character were found in reacting animals they were unhesitatingly set down as non-glanderous, without any trouble being taken to support this view by using any of the doubtful material for experimental inoculations. Leblanc also seems to have objections to the use of mallein as a method of diagnosis because certain animals which were undoubtedly glandered, and which during life displayed clinical evidence of infection, or which were found on post-mortem to be the subjects of a long standing glanders infection, did not give a characteristic reaction when tested. Looked at in the light of our accumulated experience it is, of course, easy to see where Leblanc's reasons for condemning mallein on the latter count were erroneous, but he would be more deserving of our respect if he had approached the question in a more temperate manner, and had shown himself more of an impartial investigator and less of a partisan who injures his case by the vehemence of his arguments.

Mallein is not an infallible reagent, and, like paint must be used "with brains" to obtain the best results, but after an extended experience in its use, I have no hesitation in saying that it is simply invaluable to those entrusted with the duty of arresting the spread of this disease and of stamping it out. The instructions laid out for its use by the various institutions by whom it is prepared and issued, are generally simple and explicit, and after reading them the tyro is apt to think that when he is armed with a supply of mallein the task of dealing with an outbreak of glanders is one of elementary simplicity—all that it seems necessary to do in such a case, is to remove the clinical cases and destroy them first testing them to confirm one's diagnosis; then disinfect the stable, and go through the remainder of the horses in the same way, and when this is completed the horses will have arranged themselves into two ranks—the infected and the uninfected—with perhaps a few doubtful ones, which would have to be tested again in order to finish up the work.

In actual practice he will find the work is by no means as easy as he supposed—to begin with, he may find that the clinical case which he believes to be one of glanders, does not react as he expected; this may be due to one or other of two reasons—either because the case is one of long standing and the animal system is so saturated with the poison of the disease that no negative phase follows the subcutaneous injection of the mallein; or, because the animal is not glandered, and is suffering from some other disease resembling glanders. In either case he will be wise to isolate the suspect, to disinfect the stable in which the suspected animal has been standing, and submit any discharge obtained from any suspicious sores to microscopical examination, controlling this by the inoculation of a couple of male guinea-pigs. The microscopical examination I suggest should be made chiefly for the purpose of determining that the case is not one of ulcerative lymphangitis, which is the disease of all others that is most likely to be mistaken for the cutaneous form of glanders. If the doubtful sores are due to ulcerative lymphangitis, the causal cryptococcus will be seen in unstained smears of the discharge under magnification of 800 or 1000 in large numbers, the organisms appearing as oval bodies, which can be seen by careful focussing to possess a distinct double contoured limiting membrane. It must be remembered that the discovery of the cryptococcus of ulcerative lymphangitis cannot be accepted as absolute proof of the non-existence of glanders infection, as cases of mixed infection are sometimes met with; but the experimental inoculation of guinea-pigs, will serve to throw more light on the subject. If the material obtainable for this inoculation appears to be pure and is devoid of any septic odour, it may be mixed with a little distilled water and introduced into the peritoneal cavity of the animals by means of a syringe, but if there is any doubt as to its purity, the animals should be inoculated by a process of scarification. If the inoculation is made intra-peritoneally and the disease is glanders, the animal may die in three or four days, but if it is carried out by scarification, the animal usually lives from one to three or four weeks.

(To be continued.)

DISEASES OF ANIMALS ACTS 1894 TO 1903. SUMMARY OF RETURNS.

Period.		Anthrax.		Foot- and Mouth Disease.		Glanders (including Farcy)		Rabies. Cases Confirmed.		Sheep Scab.	Swine Fever	
		Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Dogs.	Other	Out-breaks	Out-breaks.	Slaughtered *
GT. BRITAIN. Week ended Oct. 17		17	19			14	43			3	29	372
Corresponding week in	1907 .	14	21			16	36			6	27	149
	1906 .	17	17			20	56			5	29	214
	1905 ..	21	25			22	38			8	7	39
Total for 42 weeks, 1908 . .		875	1159	3	112	671	2070			652	1688	10332
Corresponding period in	1907 ..	878	1178			711	1620			434	2046	9679
	1906 ..	739	1057			893	1677			327	936	5328
	1905 ..	796	1097			1003	1727			695	665	2983
Board of Agriculture and Fisheries, Oct. 20, 1908.												
IRELAND. Week ended Oct. 10		..	..	..	..	.	..	..	..	1	1	200
Corresponding Week in	1907 ..	1	1	..	..	..	..	..	..	1	3	48
	1906 ..	..	..	..	..	..	..	..	..	7		27
	1905 ..	..	..	..	..	.	4	..	..	4	1	1
Total for 41 weeks, 1908		7	10	..	..	..	..	..	..	286	147	3465
Corresponding period in	1907 ..	3	5	..	..	5	9	..	..	203	129	2199
	1906 ..	3	7	..	..	6	14	..	..	180	83	943
	1905 ..	3	5	..	..	19	64	..	..	243	135	1402

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, Oct. 14, 1908

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection

Scottish Chamber of Agriculture.

The annual conference of the Scottish Chamber of Agriculture and Associated Societies was held on Wednesday, October 14th, within the Hall of the Highland and Agricultural Society, George IV. Bridge, Edinburgh. In the absence of Lord Carrington, who was attending a meeting of the Cabinet in London, Sir Edward Strachey, M.P., and Sir T. H. Elliott, K.C.B., were present as representing the Board of Agriculture. Mr. Munro Ferguson, M.P., an honorary vice-president of the Chamber, occupied the chair.

BUTCHERS AND A FARMERS' WARRANTY.

Mr. Andrew Hutcheson, Beechwood, moved the following resolution:—"That this meeting, while sympathising with the butchers in the past, especially in towns where they have no insurance society, thinks that absolute warranty certificates are entirely out of the question." No doubt farmers sometimes sold cattle for which they had just to take their chance, but they also sold bullocks valued at £20 and upwards, and if these proved to be diseased the farmer ought not to bear the loss. It was hard also on the butcher that he should bear the loss, but as the day when the Government would pay for the animal was far distant, he believed that a scheme of mutual insurance would solve the question. Mr. Brown seconded.

Mr. George Prentice said that the directors had had the matter before them and had suggested the following resolution:—"Resolved to assist in arranging a conference of parties interested with the view of arriving at some mutually satisfactory solution of the question at issue; and that in the meantime the Butchers' Federation be respectfully asked to withdraw their demand for a warranty which farmers were unable to give." (Applause).

Mr. Hutcheson accepted that resolution in place of his own, and it became the finding of the meeting.

The matter was remitted to the Chairman's Committee, with Mr Hutcheson added.

MILK REGULATIONS.

Mr. C. M. Douglas moved that the Conference, "under reference, and subject, to the report on the Dairies (Scotland) Bill, adopted at the Summer Conference on 17th June, 1908, resolve to heartily welcome any reasonable legislation which, while safeguarding the interests of producers, is calculated to maintain and increase public confidence in the purity and wholesomeness of Scottish dairy produce." The dairy farmers, he said, had no desire to conduct the difficult and responsible business of managing the milk supply of the country in any way but that which was most in accord with the common advantage and health of those whom they were supplying. Not only as a matter of health and public spirit, but as a matter of business advantage, they were ready to recognise that nothing was more important than that they should establish and maintain public confidence in the wholesomeness of what they were producing. (Applause). They had had lately a Bill introduced by Mr. Gulland. They were prepared to give it a large measure of support, subject to such amendment as practical experience might dictate. He had a strong opinion, if it were possible as a matter of Parliamentary procedure, it would be advantageous that they should not have separate legislation for England and Scotland, but a common Bill, dealing with both countries—for this special reason, that they had a large district on the Borders whose milk went in part to the Scottish centres and in part to the English centres, as far away as Manchester. It was surely disadvantageous to men producing milk in that district that they should have to con-

sider different regulations. Conditions affecting milk were not conditions affected by the Tweed. Were Parliament to take any course that made the production of milk more costly or difficult than it is now, that would be a great disadvantage to the community as a whole. It would, indeed, be a much less evil to suffer for a time some failure to achieve theoretical perfection in milk production than to make the supply of milk inadequate to the need of the children of great industrial centres. There ought not to be any attempt suddenly to stop the production of milk in certain ways, but rather to give opportunity over a term of years for a levelling up in the manner of production. It was a question whether a land management clause should be included in a milk Bill, but the business of providing for this, as other requirements, was one that must rest on the landlord so long as our present tenant system continued.

Compensation for Tuberculous Cows.

With regard to the question of compensation for tuberculous cows, Mr. Douglas said to deal with this matter in a narrow and illiberal spirit would retard the influence of legislation. No one had a word to say for the tuberculous cow. But he should be going too far to say they were prepared to make the public a present of the tuberculous cow. In the matter of public advantage, in which no blame or responsibility rested with the producer, it would be a foolish and impractical policy to deal narrowly with the question of compensation. Such steps should be taken as would encourage the farmer to get rid of disease. (Applause). When they increased the strictness of the control they must see the competency of the control kept pace with the increased strictness. No legislation would be satisfactory which did not make provision for associating skilled agriculturists and dairy agriculturists with the Local Govern- Board, which was to exercise this large control.

Mr. Drysdale seconded. He urged that they must see that everything was right not only at the producing end, but at the consuming end. They were producing less and less milk in our big cities, and going more and more into the country. There was a big gap between the producing and consuming end. Were the railway companies providing adequate means of conveying this milk which was so easily contaminated? In Scotland they did not. Were local authorities enforcing their bye-laws adequately? In Glasgow one of the bye-laws was that vessels containing milk must be thoroughly cleansed after the milk was emptied. The condition in which the producer got these vessels back was something shameful. He found they were being used by the retail dealers for trade purposes—by chocolate dealers and ice-cream people—and they came back in a condition that was simply disgraceful. He saw the milk being measured out in Glasgow in close proximity to the dust carts, in a germ-laden atmosphere. He thought there was room for some improvement in this respect. The city authorities ought to give more attention to the places of distribution.

Mr. Nisbet, S.S.C., Edinburgh, supported the resolution.

Mr. John Pollock, Springside, Renfrewshire, said he was not so anxious in the interests of the dairy farmers that there should be a very liberal compensation for tuberculosis; but there should be compensation for interference by local authorities when infectious disease occured in the dairy or amongst the herds. A dairyman's industry might be ruined by an abrupt stoppage on this account. Under the present Bill it was only where the local authority had interfered unwarrantably that compensation was given.

Mr. John Finlay, Springhill, said the dairymen should be proved guilty before they were condemned. He thought there should be liberal compensation for tuberculosis as the best means of ridding the country of it.

Mr. Andrew Hutcheson, Beechwood, said he was a director of two dairy companies, and they could not get milk at present for love or money. If they killed every cow that reacted on the tuberculin test, they would kill a third of the cows in the country.

Sir Edward Strachey said he had no sympathy with those of his agricultural friends who at Islington lately were advocating that the standard of milk was too high. They could not have too good or too pure a quality, or too sanitary conditions in connection with the milk supply. It was not only to the advantage of milk producers, but of the consumers as well, that the conditions should be proper. As regards separate legislation, while it might be an advantage that there should be no different legislation in England and Scotland, there were difficulties which would arise in different parts of the country. It should not, however, be beyond the wit of man to devise legislation which would be so elastic that it could be applied to nearly all parts of the country. For example, the cubic space in northern byres was not required in the west and south of England, because, with the exception of two or three months in winter in England their cows were in pasture. On the other hand it was a great advantage to the man who was sending his milk from Scotland to England that he had not to turn up an English Act of Parliament to see whether, having satisfied Scottish regulations, he was not infringing some English regulations. He reminded the conference that the official reply to the communication on the payment of expenses after a successful defence in a milk prosecution came, and very properly came, not from the Board of Agriculture, but from the Scottish Office.—*The Scotsman.*

Prevalence of Parasitic Mange in Cornwall.

Mr. W. B. Snell presided at the Cornwall Contagious Diseases (Animals) Committee which met at Bodmin on Friday, Oct. 16. The Chief Constable (Mr. R. M. Hill) reported that since the last meeting of the Committee there had been five outbreaks of anthrax, two of parasitic mange, and one of swine fever. The case referred to in his last report as still being under the restrictions of the Swine Fever Order, had since been declared free. Two horses had been attacked with the parasitic mange during the past quarter, and were still under treatment. The eleven horses referred to in his last report as still being under treatment for parasitic mange had been certified free from the disease.

Mr. J. P. Dunstan, M.R.C V.S., Veterinary Inspector of the Liskeard district, reported on the exceeding prevalence of parasitic mange in the district, and the inadequacy of the Cornwall Parasitic Mange Order, 1907. The disease was far and away more prevalent than the reported cases and published figures might lead one to believe. A careful examination of every horse in the county would reveal a tremendons number of cases of the symbiotic variety (leg mange). The question which he particularly asked the Committee to consider was whether this particular form of mange was of sufficient importance to necessitate reporting. Personally, he considered it was not, but under the present Order an inspector had no option but to report every case. If one intended to eradicate mange, he believed isolation not only of confirmed, but of suspected cases, to be necessary. This, however, he was afraid would be quite unworkable, owing to the great number of undoubtedly affected animals, but if the Order were amended to include only the more serious forms, viz., sarcoptic and psoroptic, isolation should certainly be insisted on. What he suggested was that the Board of Agriculture

should be approached with the request for an amended Order to exclude the symbiotic variety, stating as the reasons that this form is exceedingly prevalent all over Great Britain, and that even if they were to rid the county of it they had no protection against reintroduction, the Parasitic Mange Order being merely a local one, not in force in many of the districts where the symbiotic variety is most prevalent.

Mr. R. K. Elford moved—"That the Board of Agriculture be requested to amend the Cornwall Parasitic Mange Order, dated 2nd Nov., 1907, so far as to exclude the symbiotic variety."

Mr. W. Hawk seconded, and it was agreed.

Mr. Hawk further moved that Mr. Dunstan be thanked for his report, and he be asked to inform the Committee as to the approximate number of sarcoptic and psoroptic cases in the county during the last five years, or any other period; how long would it be necessary to isolate affected and suspected cases, and whether there had been any increase or decrease in the number of cases during the last 20 years.

Mr. R. K. Elford seconded, and it was agreed.—*The Western Morning News.*

Compensation for Diseased Carcases.

Professor Penberthy, of the Royal College of Veterinary Surgeons, was the principal speaker at a meeting on Saturday of the Gloucester Chamber of Agriculture, convened for the purpose of discussing the Meat Warranty question. The Professor said the subject had been regarded with an amount of importance which had never, at any rate for 40 years, attached itself to any agricultural question. He was sure that meeting would discuss it in a spirit of justice and fairness, and he thought the best way they could enter upon the discussion was to place themselves under the same conditions as the butchers. There was no standard which was more correct than that. He for one could not say he blamed the butchers for having taken up the position they had done, though they might not have been wise in presenting their position. Having bought a bullock for the food of man, and having paid a fair price for it, and having had that bullock confiscated, and having lost financially and rendered himself liable to criminal prosecution, he could quite understand a butcher having some feelings of the kind which had been expressed by the butchers. But whilst farmers sympathised with the butchers, and thought it was not right that they should suffer the loss, they felt they were not in a position to accept the burden lying down, or in the exact manner prescribed by the Meat Traders' Federation. There were several reasons why farmers should not give a warranty, and one of them was that the farmer possessed no means whatever of determining before it was killed whether an animal was free from disease and fit for the food of man. At the time of sale the farmer did nothing to deceive the butcher, but disclosed to him everything he knew about the animal, and that being so the butcher must depend upon his own judgment or take the ordinary trade risks. Then the carrying out of a system of warranty must be cumbersome, if not impracticable, owing to the difficulty of the identification of animals after they had been killed. The proper people he (Prof. Penberthy) thought, to pay compensation for affected carcases seized were those who benefited most, and that was the public. They were the people who benefited by the seizure of unfit carcases, and they should contribute largely towards the compensation of the butcher. He thought that a butcher whose animal was seized had the greatest ground for complaint, and he sympathised with him intensely, and he regretted that it had not yet been possible for both the farming and the meat traders interests to combine and to approach the Government with a view to having this matter put once and for all on a sound basis.

Dentists Act Appeal.—"Painless Extractions."

Before the Lord Chief Justice, Mr. Justice Bigham, and Mr. Justice Walton, in the King's Bench Division, on October 15, an appeal was made by Henry John Barnes, 38 High Street, Marylebone, against his conviction under the Dentists Act for unlawfully taking and using certain descriptions implying that he was specially qualified to practise dentistry, whereas he was not registered under the Act. The hearing of the case before Mr. Plowden at Marylebone Police Court on March 27th was reported in the *C. & D.*, April 4. The appellant used a description as follows:

> H. J. Barnes. Finest artificial teeth at moderate prices. Extractions. Advice free. Hours 10 to 7. English and American teeth. Painless extractions.

Mr. Plowden convicted, holding that to extract teeth without pain is exercising the highest possible skill. He stated a case for this Court. The appellant was represented by Mr. Danckwerts, K.C., Mr. F. E. Smith, K.C., and Mr. Curtis Bennett, while the respondent, Mr. W. F. T. Brown, clerk to the solicitors to the British Dental Association, was represented by Mr. R. W. Turner. After hearing counsel the Court refused to allow the appeal. The Lord Chief Justice, in giving judgment, said that the main point of the case was whether the words "specially qualified" in Section 3 refer to a person's qualifications as an individual or to some one or more of the special qualifications mentioned in the Act. The Court, he said, took the view that the words referred to special personal qualifications to practise dentistry. His Lordship compared the words in the Veterinary Surgeons Act, Section 17, and in the Medical Act, 1886, Section 26, with those of Section 3 of the Dentists Act, also dealing with the various cases which have been decided under the Veterinary Surgeons Act and the Dentists Act, referring particularly to the cases of Elmslie *v.* Paterson, decided in Ediburgh, where the descriptions "American Dentistry" and "Dental Office" were used. He said that the Judges in that case construed these descriptions as being personal qualifications of a man to practise dentistry. He also dealt with the Panbans case, saying that, as in the present case, the respondent had been operated upon and work had been done—it was not merely a case of selling teeth. The other Justices agreed.—*The Chemist and Druggist.*

ARMY VETERINARY SERVICE.

Extract from *London Gazette*,

WAR OFFICE, WHITEHALL, Oct. 16.

TERRITORIAL FORCE. UNATTACHED LIST.

G. W. Weir to be Vet.-Lieut. Dated April 1.

W. A. Macgregor to be Vet.-Lieut. Dated June 26.

Oct 13.

VOLUNTEER CORPS.

Royal Garrison Artillery—1st Fifeshire.—Vet.-Capt. P. Young resigns his Commission, with permission to retain his rank and wear the prescribed uniform.

COUNCIL REPORT.—A CORRECTION.

Sir,

In your very excellent report of the meeting of Council a slight error occurs as to what I said in reply to General Thomson's remarks on the examination of a student. I am made to say "The examiners in the *older classes*," etc. What I really stated was "The examiners *in all classes*," etc. May I ask you kindly to make this very necessary correction.—Yours faithfully, W. J. MULVEY.

OBITUARY.

WM. WHITTLE, F.R.C.V.S., Southport.

1848. Graduated, Edin: April, 1886. Fellow, Feb. 1877

Mr. Whittle died on the 19th October, at the age of 83.

G. A. HEWITT, M.R.C.V.S., Aldershot.

Lond: Dec., 1893.

An accident took place on Monday night, 12th inst., resulting in the tragic death of Mr. George Ailwyn Hewitt, of Ayling House, Ayling Lane. In Wellington Street, Mr. Hewitt hailed Mr. C. Knight, a hansom cab driver, who drove him towards his home. It is stated that the horse got out of control, and at the top of the hill, close to Highfield House, it bolted and ran down the hill. Before the driver could regain control it ran close to the bank, on nearing the corner turning to Ayling House, and the near wheel ran into the bank on the left side of the road. The cab overturned, the driver, Knight, being thrown from his seat, and receiving a severe shaking. Mr. Hewitt was found inside the cab, and presumably dead, there being no sign of life. He was removed from the cab and carried into his house, where Drs. Gibson and Stroyan very quickly arrived. They, however, found life to be extinct.

Mr. Frampton, who arrived on the scene soon after the accident, states that when he arrived the horse had been removed from the cab and was standing in the road, the driver seemed dazed as the result of his fall, and the deceased was still in the cab. He was lying on his right side, with his shoulders and head forward, and his chin resting upon his chest. The door of the cab was shut. The driver had not realised the man was dead, but Mr. Frampton found such was the case when he struck a match.

The deceased, who was 37 years of age, was a member of an Aldershot family, and some two or three years ago inherited the bulk of the estate of the late Mrs. Stovold. He was a veterinary surgeon by profession, but latterly had contented himself with farming the estate which came to him. He leaves a widow, but no children.

THE INQUEST.

On Thurday morning, 15th inst., Mr. W. E. Foster, the Deputy Coroner, conducted the inquiry at Ayling House into the cause of death, Mr. R Attfield was chosen foreman of the jury.

Mr. R. W. Mason, solicitor, of Farnham, appeared to represent the family.

Medical evidence was given by Dr. J. H. Gibson, who stated that he and his partner had attended deceased for several years. He was called to see him about midnight on Monday. He went at once and arrived just before qnarter past 12. The deceased was lying on a sofa, quite dead.

What do you think was the cause of death?—I think he had a fracture of the neck. There was a slight cut on one hand.

In answer to the Coroner, the witness said he saw the cabman Knight, who was perfectly sober.

Charles Edward Knight, a hansom cab driver, said that that his horse was an aged horse. It had bolted with him before when soldiers had hit it with a stick, but otherwise it was a very quiet horse. He had never had an accident before during the six or seven years he had been driving in Aldershot. It was a very common occurrence for soldiers to say, "Look sharp, cabby!" and strike the horse with a whip when it was not going fast enough. The deceased was a frequent fare, and at times when he was in a hurry to get home he would strike the horse with a stick and say, "Look sharp, Knight."

"On the night of the accident," continued the witness, "I was walking the horse round the corner of Wellington Street and the deceased got into the cab, and I drove him home by way of Grosvenor Road and Church Lane. Just by Highfield House I felt the cab go down on the horse's back, and it bolted down the hill. The horse ran into the bank at the corner of Ayling Lane and the cab went over on its side. I was thrown off my box but got up and went to the cab and saw the deceased lying in the bottom of the cab. I took hold of him and said "Wake up, George!" but he did not move. Help arrived, and he was carried into the house."

The witness expressed the opinion that the deceased must have leaned forward, and the horse, expecting that it was going to be hit, jumped forward and bolted.

Answering Mr. Hiscock, the witness said the deceased was huddled up on the mat in the bottom of the cab.

Questioned by the Coroner, Knight said he was pulling the horse in, and if the road had been straight he would have been able to have stopped it.

John Stephen Frampton, of Heath End, told how he arrived on the scene of the accident and helped the last witness to lift the body out of the hansom.

After listening to a few remarks from the Coroner the jury returned a verdict of "Accidental death," and found that no blame attached to the cabman Knight.—*Aldershot News.*

HENRY FERRIS, M.R.C.V.S.

Lond: May, 1861.

The Register gives Henry Ferris, of Brecon, and Richard Ferris, of Totnes.]

Mr. Sidney Hacker, Devon County Coroner, on Wednesday held an inquest at Capton, Dittisham near Dartmouth, concerning the sudden death of Mr. Henry Ferris, a well-known veterinary surgeon, who was found by his son dead in his armchair on Monday.

John Victor Russell Ferris, living at Manning's Farm, identified the body as that of his father, with whom he had lived. Deceased was seventy-two years of age last May. His wife died a long time ago, and witness was his only son. Deceased had been medically attended for years. Last Friday he complained of headache and neuralgia and a pain in the stomach. On that day he went to Dartmouth. He was not worse on Saturday last, but on Sunday was ill, and had to come back from chapel. He ate his dinner, however. He went to bed on Sunday as usual, but had a very troublesome night, suffering from pains in the stomach. Before deceased got up on Monday witness took him up a cup of tea. On Monday Mr. Wood drove him to Dittisham Court to attend a case, and when he came back he was bad, but would not have a doctor. He sat down in the kitchen, and witness left him, as he thought he was going to have a nap. When witness returned about two o'clock he found his father sitting back in the chair dead.

After further evidence, Dr. G. M. Soper, of Dartmouth, attributed death to heart disease.

The jury returned a verdict in accordance with the medical evidence.

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COMMUNICATIONS AND PAPERS RECEIVED.—Mr. W. J. Mulvey.

Annual Report of the Punjab Vet. Coll., and Civil Vet. Dept., Punjab, 1907-8.

The Chemist and Druggist, The Upper Burma Gazette (Mandalay), *The Western Morning News.*